

REMARKS

Applicant thanks the Examiner for the recent Office Action.

Claims 1-2, 5-7, 36, 39-40 and 43 are pending. Claims 3-4, 8-11, 13, 24, 33-34, 37-38 and 41-42 are canceled without prejudice or disclaimer. Withdrawn claims are 12, 14-16, 18-23, 25-32, and 35.

Amendments to claim 1 are fully supported by the specification, including particularly pages 8-10 of the specification. The specification specifically recites that the electrically conducting surface coating may be applied on one or both sides. The amended claims are directed to the particular embodiment wherein the coating is applied to only the underside, i.e. the side located remotely from the fluorochemically treated user interface surface of the fabric. As indicated on page 9, the electrically conductive coating is applied without negatively impacting the textile hand or feel of the textile.

The Office Action

In the Office Action, the previously applied art and double patenting rejections were withdrawn. Further, the claims and the amendments to the specification were approved.

The claims 1, 5, 6 and 37 were rejected under section 102 in light of Green (US 2004/0076792A1)("Green"). The claim 36 is rejected under section 103 in light of Green.

Claims 1, 2, 5, and 7 and also 36-43 are rejected under 103 as unpatentable over Bullock (US 6,251,210) in view of Fraser (US 5,804,291).

*The Claims are not Anticipated
Under Section 102 in Light of Green*

For a claim to be anticipated, each and every element or feature in the claim must be present in the single prior art device. In this instance, the claims are not anticipated by Green. Green does not disclose a conductive coating layer on the back side (second side) of a fabric that is remote from the user surface of the fabric. Further, Green does not disclose the use of a conductive coating layer comprised of a binding agent and a conducting agent. These features are specifically claimed. Green discloses merely a somewhat vague "laundry list" of optional things that may be used with its carpet. Included in that long list is "antistatic agents". There is no disclosure of what such agents could be chemically, what materials would be used, including application methods and the like, i.e., how they are to be applied. This is merely a recitation of a *desired function*, and is not an enabling disclosure of any real material that is capable of bringing about that result. Green certainly does not disclose the claimed invention, and as such, Green cannot be used under section 102 to reject the present claims.

Green is Unavailable to Reject Under Section 103

The present application is assigned to Milliken & Company, and this assignment was recorded in the patent office on March 17, 2004 at reel 015094/ frame 0622. Likewise, the Green application has at all times been owned by Milliken & Company. The present invention has at all times been owned by Milliken & Company, as the inventors all have a contractual employment agreement obligation to assign inventions to Milliken & Company. Declaration, para 4. Commonly owned applications, such as

Green, may not be used to reject other commonly owned applications, in this instance, under section 103. See Section 103(c)(1).

The Bullock and Fraser Prior Art References

Bullock teaches treating a fabric with a fluorochemical textile treating agent and an optional antimicrobial in a first treating composition. Then, in a second step, a *polymeric film* may be knife coated on one side of the fabric. Bullock does not teach application of a conductive coating layer. Further, Bullock does not disclose the use of a conductive coating layer comprised of a binding agent and a conducting agent, disposed on only the second (backside) of a textile. Even the Office Action concedes that Bullock does not teach the use of an electrically conductive coating on the fabric:

“Bullock et al. fail[s] to teach the use of an electrically conductive coating on the fabric.” Office Action, page 4.

The fabric of Bullock, without more, does nothing to prevent undesirable static build-up in fabrics. In fact, the Bullock fabric is probably worse, with regard to static charges, than an untreated fabric. Declaration of Inventor Sidney Locke (hereafter “Declaration”), para 5. This is because fluorochemical treatment to fabrics is generally believed to make the resulting treated fabric somewhat less conductive of charge, resulting in undesirable build-up of charge. Declaration, para 5.

Fraser teaches dipping a fibrous web substrate (preferably, nonwoven) into an aqueous solution containing a conductive material and a binder. Thus, the conductive material and binder are applied to the entire fibrous web substrate, followed by squeezing out the excess liquid, and drying. Column 2, lines 20-50. This process results in a nonwoven with conductive material and binder (“glue”) applied upon all

surfaces and all fibers, including the user interactive surface as well. The application of binding agents in this manner to all surfaces would undoubtedly reduce hand and softness, resulting in a substrate that is rough, stiff, and firm --- not soft to the touch.

Fraser teaches away from the use of layers of conductive material: "Clearly, items such as carpet, computer furniture, and heated socks and gloves cannot utilize conductive layers when the production or incorporation costs of layers push the price beyond reasonable limits.". Fraser teaches application of conductive materials to the entire textile, by dipping in a bath of aqueous solution. Fraser does not teach layers.

The Combination of Bullock and Fraser Does Not Render Obvious the Claimed Invention

The Office Action combination of Bullock and Fraser prior art references would not lead a person of skill in the art to the claimed invention. The result achieved by the invention is not predictable. In this instance, the combination of various prior art references that would be required to "hypothetically reproduce" the invention would require altering the prior art by more than mere substitution. Further, there was no teaching, suggestion, or motivation in the art to make the claimed inventive combination. Additionally, there are common sense reasons to explain why the invention would not have been obvious to a person of skill in the art.

The following points are made on the technical aspects of the nonobviousness of this invention:

1. Inoperable Combination: The application of Fraser's aqueous solution could not be in fact easily be applied as a secondary treatment to Bullock's fabric (inoperable

combination);

2. Dipping Versus Applying a Conductive Layer on Only One Side: Fraser teaches dipping to coat the entire substrate (all surfaces) with conductive material. Fraser does not teach applying a conductive layer to only one side of the material.

3. Teachings in the Art Suggest Applying the Conductive Material to User Interface.

The teachings in the art are consistent with Fraser, that is, they suggest that for the most efficient static discharge, one should apply conductivity enhancers to the surface that is likely to be contacted by the electrically active item (i.e. user interface surface).

4. Unexpected Results. Contrary to prior art teachings, applicants have unexpectedly discovered that application of a conductive layer remote from the user surface actually works well to reduce static.

5. No Teaching to Substitute a Remote Conductive Layer for Dip Coating. There is no suggestion in the art, and no suggestion in Fraser or Bullock, to substitute for dip coating a conductive coating layer that is located remote from the user interface.

6. Common Sense. Common sense indicates that a person would be unlikely to try using a remote conductive coating layer. Dip coating applies the conductive material directly to the user interface, not remotely.

7. Unpredictable. It is unpredictable that the configuration of the invention would conduct charge reliably from a fabric, given the unusual gap between the conductive coating layer and the user interface.

The above seven (7) technical points are provided below, in more detail.

1. *Inoperable Combination*. The application of Fraser's aqueous solution

could not be easily applied as a secondary treatment to Bullock's primarily treated fabric. Bullock teaches two treatments – a primary and a secondary. The primary treatment applies 5% or more weight percent fluorochemical treatment agent. Then the fabric is dried. This fabric is now extremely water repellent, and water essentially beads and slides from the surface of this fabric, without penetration. This is the goal of Bullock – to render the fabric impermeable to aqueous solutions. The combination of Bullock and Fraser, then, would involve taking this Bullock primarily treated fabric and then applying a Fraser aqueous carbon black with binder treatment. But, the Bullock fabric would not readily absorb the Fraser aqueous treatment in a Fraser dip coating operation, because the fabric would be highly repellent to aqueous solution. Thus, the combination of Bullock and Fraser, as taught by the references, likely would be inoperable. Declaration, para. 7. Thus, it would require much more than "mere substitution" to reproduce the invention by combining these references. Further, simply adding the Fraser teaching to the Bullock teaching would not be sufficient to reach the invention.

2. Dipping Versus Applying a Conductive Layer on Only One Side. Fraser teaches dipping to coat the entire substrate (all surfaces) with conductive material. Fraser does not teach applying a conductive layer to only one side of the material. In the Office Action, no reason is given as to why a person of skill in the art would be inclined to abandon the Fraser dipping method, and venture out in search of some alternate method for dip coating conductive material upon the fabric.

The Office Action uses circular reasoning to explain the issue of obviousness.

First, it is stated that Bullock teaches applying fluorochemical treatment in a manner so as to preserve the natural hand of the fabric. Bullock is concerned with preserving fabric softness to the user. But, then, when faced with a prior art combination of: (1) Bullock's fluorochemically treated fabric with retained soft hand, combined with (2) Fraser's aqueous solution for dip coating the fabric, the Office Action takes a "giant leap" in a direction that is directly contrary to the teachings of the art. This is further explained below, with relation to the location of conductive materials. This "giant leap" is taken for no other reason than to follow along, in hindsight reconstruction, the unexpected pathway chosen by the applicants in development of the invention. The Office Action says: "placing a coating of carbon black on the visible surface of Bullock et al would detrimentally affect the aesthetics of the treated fabric." Office Action, page 5. Perhaps that is true, and perhaps it is not true, as there is no evidence to support this assertion. But -- there is no evidence in the cited art that any other method of applying conductive material (other than Fraser dip coating method) would provide the desired antistatic effect.

3. Teachings in the Art Suggest Applying the Conductive Material to User Interface. The teachings in the art are consistent with Fraser. That is, the teachings suggest generally that for the most efficient static discharge one should apply conductivity enhancers to the surface that is likely to be contacted by the electrically active item (i.e. user surface). Declaration, para 9. For some time, the industry has been using conductive face yarns for charge dissipation in certain applications. Such yarns are designed to provide the conductive material directly on the fibrous user

interface, in the yarns that contact the user, where the conductive material will be available for direct electrical contact with the undesirable static charge brought to the fabric surface by the user. Declaration, para. 9. Thus, the industry teaching in the art before the invention was to apply conductivity enhancers at or adjacent the user interface. This is consistent with Fraser dip coating upon the user surface.

4. *Unexpected Results.* Contrary to prior art teachings, applicants have unexpectedly discovered that application of a conductive layer remote from the user surface actually works well to reduce static. Declaration, para. 10. This is not recognized in the cited art, and this mode of application is at odds with the relevant teachings of the prior art.

5. *No Teaching to Substitute a Remote Conductive Layer for Dip Coating.* There is no suggestion in the cited art, and no suggestion in Fraser or Bullock, to substitute for dip coating a conductive coating layer that is located remote from the user interface. Declaration, para. 10. This feature of the invention is unexpected, and would not have been anticipated by a person of skill in the art. The illustrations attached to the Declaration of Inventor Sidney Locke shows differences between (1) the teachings of a hypothetical Bullock/Fraser combination, and (2) the invention. These illustrations are not actual drawings in this application, but are submitted only for purposes of illustrating nonobviousness of the invention.

6. *Common Sense.* Common sense indicates that a person would be unlikely

to try using a remote conductive coating layer, when dip coating applies the conductive material directly to the user interface, where the charges are deposited upon the fabric.

Declaration, para. 11. Electrical conductivity is known to be enhanced by a continuous and uninterrupted circuit. In the context of a fibrous fabric, this connection would be from the static generating region to the static dissipating region. Declaration, para. 11.

It is contrary to logic that one could achieve excellent static dissipation by employing a conductive coating layer that is removed and remote from the user interface, where there is a gap between the static source and the static dissipating structure.

Declaration, para. 11.

7. *Unpredictable.* It is unpredictable that the invention would conduct charge reliably from a fabric, given the gap between the conductive coating layer and the user interface. Declaration, para. 6 and 10. A person of skill in the art would not be expected to try to introduce a gap between these two regions, with the expectation of achieving advantageous charge dissipation. However, the invention accomplishes this result, in part by providing a conductive coating layer on only the backside (underside) of the fabric, remote from the user interface. Declaration, para. 10.

COMMERCIAL SUCCESS OF THE CLAIMED INVENTION

An independent basis for a finding of nonobviousness is the commercial success of the invention:

Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origins of subject matter sought to be patented. As indicia of nonobviousness or nonobviousness, these inquiries may have relevancy.”

Graham v. John Deere Co., 383 US 1, 17-18 (1966),

Thus, the Supreme Court of the United States in *Graham* established a clear rule of law that objective evidence of nonobviousness such as commercial success of an invention is relevant and must be considered on this issue. This doctrine of commercial success as rebutting obviousness recently received favorable comment by the United States Supreme Court just this past year, in *KSR International Co. v. Teleflex, Inc.*, 127 S.Ct. 1727, 550 U.S. 1, 2 (2007).

The invention of this application was first launched as an automotive body cloth seat fabric in mid-2006. Declaration, para. 12. The fabric was launched under the trademark YES Essentials®. See also www.yesessentials.com for a full product description. The product is shown in the advertisements and/or press releases attached to the Declaration of Sidney Locke, filed with this Amendment. The product incorporates an easy to clean repellency finish on the user surface of the fabric, an antimicrobial odor control feature, and static shock resistance. Declaration, para 12. Static shock is long term a problem (particularly in winter) for persons exiting a vehicle. In fact, it can even be dangerous in association with refueling a vehicle. Declaration, para. 12. The YES Essentials® product reduces or eliminates the static shock problem. Declaration, para. 12.

YES Essentials® has been the most commercially successful automotive fabric product launch in the history of Milliken & Company. Declaration, para. 13. This

fabric now is sold to major automobile manufacturers in the United States, for incorporation into the following vehicle models: Chrysler Sebring Convertible, Chrysler Town and Country Van; Dodge Avenger; Dodge Caliber, Dodge Caravan, Dodge Dakota, Dodge Durango, Dodge Nitro, Dodge Ram, Jeep Compass, Jeep Patriot, Jeep Wrangler, Chrysler Pacifica, Chrysler PT Cruiser and Chrysler Aspen. Declaration, para. 13.

Even though this product has been sold only since about mid-2006, it now accounts for several million yards of fabric per year. Declaration, para. 14. Declaration, para. 14. To date, the amount of revenue that may be attributed to this invention is at least about 20 million United States dollars since initial product launch. Declaration, para 14.

The fabric of the YES Essentials® brand incorporates the claimed invention, as set forth in this patent application. Declaration, para. 14. The commercial success of YES Essentials® is believed to be due primarily to the novel and inventive features described and claimed in this patent application. Declaration, para.14.

Summary

The invention is not anticipated by Green, and therefore Green cannot be used to reject the claims. The inventions are commonly owned, and Green is not available for use in obviousness rejections.

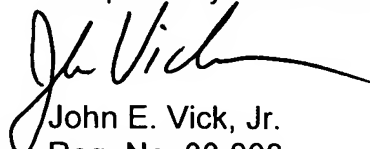
The Office Action section 103 combination of Bullock and Fraser does not lead to obviousness. Bullock and Fraser, as combined, would not lead a person of skill in the art to the claimed invention. The result achieved by the invention is not

predictable. In this instance, the combination of various prior art references that would be required to "hypothetically reproduce" the invention would require altering the prior art by more than mere substitution. Furthermore, there is no teaching, suggestion, or motivation in the cited art to make the claimed inventive combination. Common sense (and the prior art) counsels against making the modifications that in fact have been made by applicant in the structure of the invention as claimed. There is no basis for the "giant leap" in the text of the Office Action.

The YES Essentials® brand automotive fabric has been an overwhelming and outstanding commercial success in the automotive industry. Commercial success is relevant to the obviousness issue, and must be considered under the relevant patent law precedent.

General Fee Authorization: In the event that there are fees, including extension fees, associated with the completion of the Missing Parts for this application that are not specifically authorized by this Amendment, Applicant hereby authorizes the Commissioner to withdraw those fees from our Deposit Account No. 04-0500.

Respectfully Submitted,



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